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ASTREPTOSYLLIS ACRASSISETA, A NEW GENUS AND SPECIES OF THE SUBFAMILY EUSYLLINAE (POLYCHAETA: SYLLIDAE) FROM AUSTRALIA

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Abstract.—*Astreptosyllis acrassiseta* is a new genus and species of syllid polychaete belonging to the subfamily Eusyllinae from Victoria, Australia. *Astreptosyllis* exhibits characters intermediate between those of *Streptosyllis* and *Syllides*.

Attempts to confirm the identity of a syllid polychaete originally identified as *Streptosyllis* led to a revision of all known *Streptosyllis* species (Kudenov and Dorsey, in preparation), and to the present paper describing *Astreptosyllis acrassiseta*. The new genus is compared to both *Streptosyllis* Webster and Benedict, and *Syllides* Örsted with which it exhibits intermediate characteristics.

Specimens were collected as part of the Port Phillip Bay and Westernport Bay Environmental Surveys by the Marine Pollution Studies Group (now known as the Marine Science Laboratories), Ministry for Conservation, Melbourne, Victoria. Details of the survey areas, stations and their physical parameters are presented by Poore *et al.* (1975) and Coleman *et al.* (1978).

Specimens are deposited at the following institutions: Allan Hancock Foundation, University of Southern California, Los Angeles (AHF); Australian Museum, Sydney (AM); National Museum of Victoria, Melbourne (NMV); and the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM).

Astreptosyllis, new genus

Type-species.—*Astreptosyllis acrassiseta* new species, by monotypy.

Diagnosis.—Prostomium with 2 pairs of eyes, 3 antennae; paired palps fused basally, distally digitiform, directed anteriorly and ventrally (visible from above). Pharynx unarmed with distal circlet of papillae. Proventriculus occupying up to 8 segments. Peristomium with 2 pairs of tentacular cirri, latter long, cylindrical, pseudoannulate, slightly club-shaped. Dorsal cirri long, cylindrical, pseudoannulate anteriorly, becoming strongly annulate posteriorly. Ventral cirri smooth, short anteriorly, becoming prolonged posteriorly. Parapodia uniramous, supported by single aciculum. Acicula slightly knob-shaped distally, having thin-shafts throughout. Superior dorsal simple setae with distal hoods. Composite falcigers of 2 kinds, with or without distal hoods: anterior ones having thick-shafts and short, enlarged blades; and medial and posterior ones having thin-shafts and narrow blades. Inferior ventral simple setae absent. Pygidium lacking anal cirri.

Remarks.—*Astreptosyllis* is most closely allied to *Streptosyllis* and *Syllides*. It is most similar to *Streptosyllis* in having 2 kinds of composite falcigers, superior

dorsal simple setae bearing distal hoods, and prolonged ventral cirri in posterior setigers. *Astreptosyllis* is also similar to *Syllides* in having only thin-shafted acicula in all setigers. In this feature, *Astreptosyllis* clearly differs from *Streptosyllis* since the latter possesses two kinds of acicula. *Syllides* further differs from *Astreptosyllis* in having only one kind of composite falciger, in lacking distal hoods on dorsal simple setae, and in lacking prolonged ventral cirri in posterior setigers. Only the type-species, described below, is known.

Etymology.—The generic name derives from the Latin prefix '*a*' meaning without, and the generic name, *Streptosyllis*. Gender: feminine.

Astreptosyllis acrassiseta, new species
Fig. 1

Material examined.—VICTORIA (AUSTRALIA): Westernport, Westernport Bay Environmental Study Station 1722, 9 m, coarse sand, 22 November 1973; holotype (NMV G2771), 1 paratype (NMV G2772). Sta. 1707, 1 m, coarse sand, 7 January 1974; 1 paratype (NMV G2773). Sta. 1724, 18 m, medium sand, 22 November 1973; 1 paratype (NMV G2774). Sta. 1728, 10 m, coarse sand, 20 November 1973; 1 paratype (NMV G2775). Port Phillip Bay, Port Phillip Bay Environmental Study Station 945/3, 4 m, coarse to medium sand, November 1971; 1 paratype (NMV G2776). Sta. 945/4; 1 paratype (AM W.18586). Sta. 973/2, 13 m, medium sand, February 1971; 1 paratype (AM W.18587). Sta. 973/4; 1 paratype (USNM 74488). Sta. 984/4, 5 m, coarse sand, February 1971; 1 paratype (AHF POLY 1224). Sta. 985/3, 9 m, coarse sand, December 1971; 2 paratypes (AHF POLY 1223).

Description.—Small species, measuring up to 3.1 mm long, 0.3 mm wide without parapodia, 0.5 mm wide with parapodia, for up to 42 setigers; holotype 2.0 mm long. Body lacking pigmentation in alcohol; articles of annulated dorsal cirri with golden-yellow pigment granules; with lateral ciliary bands on prostomium, segments and pygidium.

Prostomium wider than long, with 2 pairs of red-colored eyes in trapezoidal arrangement, the anterior pair farthest apart; antennae slightly club-shaped and pseudoannulate, these missing in all specimens except holotype. Lateral antennae inserted between anterior pair of eyes; median antenna inserted between posterior pair of eyes as indicated by scars. Palps large, directed anteriorly, becoming ventrally oriented towards the digitiform tips (Figs. 1a, b). Pharynx unarmed, with 10 terminal papillae. Proventriculus large, pear-shaped, generally present in setigers 5–12 [or setigers 3–9 of paratype (NMV G2772)]. Peristomium with 2 pairs of long, cylindrical tentacular cirri, pseudoannulate and slightly club-shaped distally (Fig. 1a).

Anterior parapodia truncate distally (Fig. 1c), becoming elongate and conical posteriorly (Fig. 1d). Dorsal cirri of first 2 setigers resembling antennae and tentacular cirri; those following strongly annulate with anterior ones each having 6 oblong articles, increasing to 9 posteriorly. Ventral cirri of anterior segments thick, conical, extending to tips of parapodial lobes (Fig. 1c), becoming greatly prolonged and pseudoannulate posteriorly (Fig. 1d).

Acicula thin-shafted with distally knobbed tips (Fig. 1e), being difficult to detect in dense setal fascicles of setigers 1–6. Superior dorsal simple setae present in all

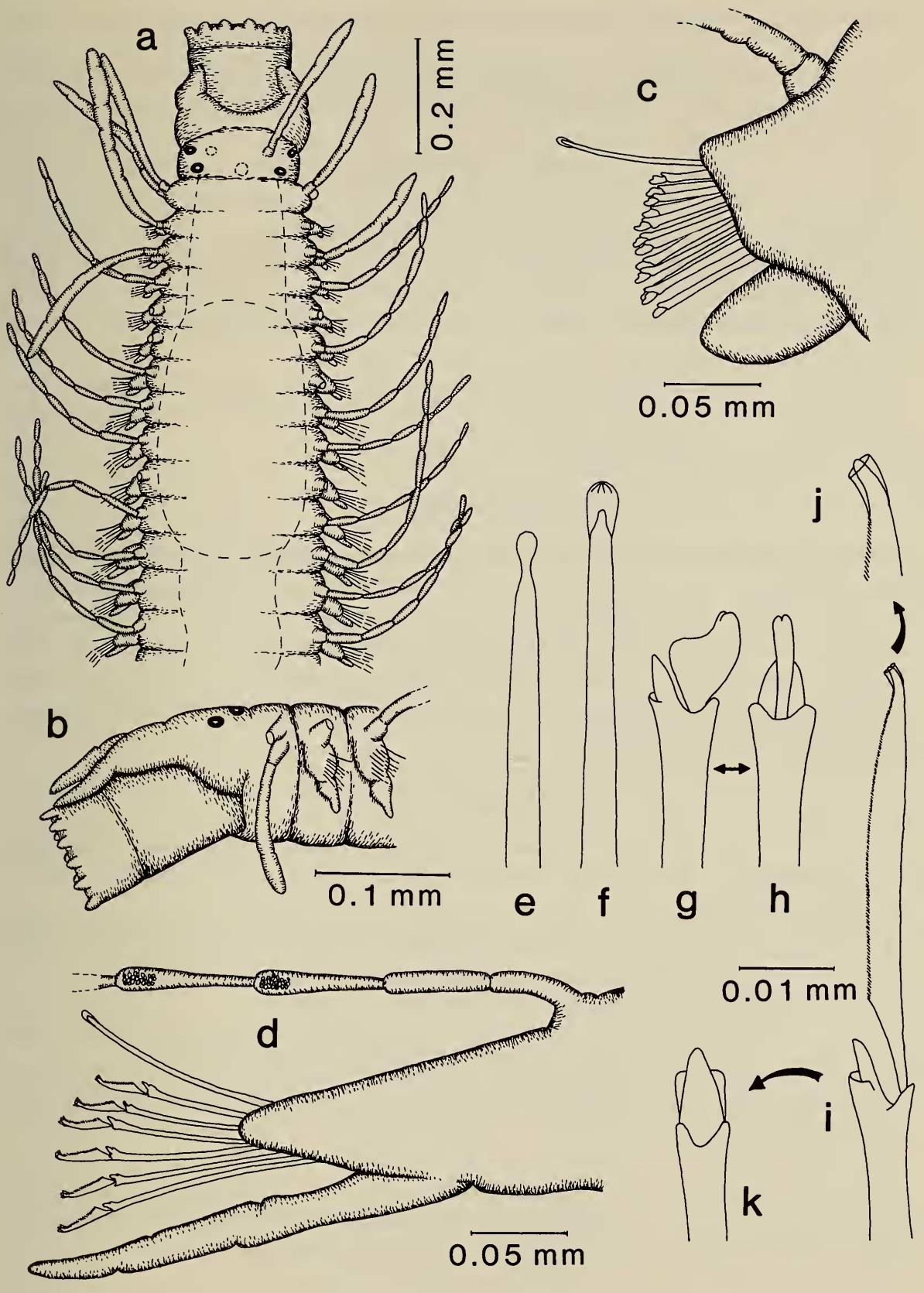

Fig. 1. *Astreptosyllis acrassiseta:* a, Holotype: Anterior end, dorsal view, pharynx extended; b, Paratype (NMV G2772): Anterior end, lateral view; c–k, Holotype: c, Parapodium from setiger 3, anterior view; d, Parapodium from setiger 29, anterior view; e, Aciculum from setiger 3; f, Dorsal simple seta from setiger 3; g, Anterior enlarged composite falciger; h, Same, ventral view; i, Posterior composite falciger; j, Same, detail of blade tip; k, Same, detail of shaft tip, ventral view.

setigers, having thin-shafts, tapered blunt tips, digitiform to vesiculate hoods (Fig. 1f).

Setigers 1–6 each with 8–12 enlarged composite falcigers; blades stout, distally unidentate with large, rounded basal spurs and smooth cutting margins (Fig. 1g), appearing distally bifid in ventral view (Fig. 1h); shaft tips with dorsal superior branch terminating in 1 medial tongue-shaped lobe and a broad subterminal cup-shaped flange, with ventral inferior branch broadly incised distally (Figs. 1g, h). From setiger 7 to end of body, each fascicle with 6–8 slender composite falcigers; blades long, unidentate, with funnel-shaped distal hoods and minutely serrated cutting margins (Figs. 1i, j); blades of superior falcigers about 2× longer than lower ones within a fascicle; shaft tips not inflated, resembling those of setigers 1–6 (Figs. 1i, k). Transition between setigers 6–7 abrupt.

Pygidium wider than long, 2× longer than preanal segments, lacking anal cirri.

Etymology.—The epithet, *acrassiseta,* refers to the absence of enlarged acicular spines; it is regarded as a noun in apposition.

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